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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
JARRETT, SCOTT L	
ART UNIT	**PAPER NUMBER**
3623	

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/945,193	SUERMONDT ET AL.	
	Examiner	Art Unit	
	Scott L. Jarrett	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Title

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Selecting Repair Parts Utilizing Expected Waste Parameters.

Claim Rejections - 35 USC § 101

2. Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

(1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result.

Regarding Claims 1-16, Claims 1-16 only recite an abstract idea. The recited method for predicting parts needed for a repair does not apply, involve, or use the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. The claimed invention, as a whole, is not within the technological art as explained above claims 1-16 are deemed to be directed to non-statutory subject matter.

Examiner suggests that the applicant incorporate into Claims 1-16 language that the proposed method is a computer-implemented (computerized) method and that at least one of the method steps is implemented by a computer to overcome this rejection.

Correction required. See MPEP § 2106 [R-2].

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4-5 and 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Smith, Stephen et al., Optimal Inventories based on Job Completion Rate for Repairs Requiring Multiple Items (1980).

Regarding Claim 1 Smith et al. teach a method for "optimizing multi-item inventories for repair of field equipment based on holding costs and the probability of job completion without stockout." (Abstract; Page 849). Smith et al. further teach that optimizing the inventory (stock, parts, items, components, materials, etc.) "problem" is old and very well known ("fly away kit", "submarine provisioning problem"; Paragraph 2, Page 849).

More specifically Smith et al. teach a method for predicting the parts (items, kits, components, tools, supplies, materials, etc.) needed for a repair comprising:

- determining an expected waste (inventory cost, transport cost, time cost, service efficiency, usage, utilization, etc.) for a set of parts (items, supplies, components, kits, etc.) of a product that may be replaced (Paragraphs 1-2, Page 849; Paragraph 1, Page 850; Equations 2.1, 3.1 and 3.2, Pages 851-852); and

- selecting the parts having a lowest expected waste for the repair (i.e. optimizing the inventory carried to the onsite/field repair; Paragraphs 1-2, Page 849; Paragraph 1, Page 850; Equations 2.1, 3.1 and 3.2, Pages 851-852).

Regarding Claim 4 Smith et al. teach that the method for predicting/optimizing the parts needed for a repair further comprises determining an expected waste caused by unnecessarily (unneeded, unused, waste, excess, extra, etc.) sending (carrying, taking, provisioning, etc.) a part to a repair (excess inventory, holding costs, etc.; Pages 849-850).

Regarding Claim 5 Smith et al. teach that the method for predicting/optimizing the parts needed for a repair further comprises determining an expected waste caused by not sending (having, taking, provisioning, stocking, stockout, etc.) a needed part for the repair (i.e. part is unavailable for a repair, penalty cost, machine down time, lost repairmen time, extra trips for needed parts, etc.; Abstract; Pages 849-850).

Regarding Claim 11 Smith et al. teach that the method for predicting/optimizing the parts needed for a repair wherein selecting the repair parts further comprises selecting parts for an on-site repair (field, onsite, etc.; Abstract; Page 849).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2-3, 6-10 and 12-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, Stephen et al., Optimal Inventories based on Job Completion Rate for Repairs Requiring Multiple Items (1980) as applied to Claims 1, 4-5 and 11 above and further in view of Glovitz et al., U.S. Patent No. 5,862,421.

Regarding Claim 17 Smith et al. teach that the method for predicting/optimizing the parts (items, kits, components, tools, supplies, etc.) needed for a repair comprising:

- determining an expected waste (inventory cost, transport cost, time cost, service efficiency, usage, utilization, etc.) for a set of parts (items, supplies, components, kits, etc.) of a product that may be replaced (Paragraphs 1-2, Page 849; Paragraph 1, Page 850; Equations 2.1, 3.1 and 3.2, Pages 851-852); and

- selecting the parts having a lowest expected waste for the repair (i.e. optimizing inventoried carried to the onsite/field repair (Paragraphs 1-2, Page 849; Paragraph 1, Page 850; Equations 2.1, 3.1 and 3.2, Pages 851-852).

Smith et al. does not expressly teach an apparatus (system, computer) for implementing the method for predicting/optimizing the parts necessary for a repair as claimed.

Official notice is taken that automating a manual method/process is old and very well known. Further it was known at the time of the invention that merely providing an automatic means to replace a manual activity which accomplishes the same result is not sufficient to distinguish over the prior art, In re Venner, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958). For example, simply automating the steps of predicting/optimizing the parts needed for a repair gives you just what you would expect from the manual step as shown in Smith et al. In other words there is no enhancement found in the claimed apparatus. The claimed apparatus for predicting the parts needed for a repair only provides automation for the manual activity. The end result is the same as compared to the manual method. A computer can simply iterate the steps faster. The result is the same.

It would have been obvious to one skilled in the art at the time of the invention that the method for optimizing/predicting the parts needed for a repair as taught by Smith et al. would have benefited from being automated in view of the teachings of official notice; the resultant system providing the well known benefits of automation.

Regarding Claims 2 and 18 Smith et al. does not teach identifying a set of symptoms (signs, activities, results, etc.) associated with the product (i.e. diagnostics) as claimed.

Glovitz et al. teach identifying a set of symptoms (failure type/mode, nature of the malfunction, etc.), in an analogous art of field service/repairs, for the purposes of accepting and appropriately assigning service requests based on the symptoms, technician skill level and other factors (nature of the repair/failure; Column 1, Lines 41-60; Column 2, Lines 42-53; Column 10, Lines 36-44; Column 14, Lines 20-25; Table 1, Fields 5 and 27-28).

More generally Glovitz et al. teach a method and system for managing the repair of field equipment wherein service requests are made/received, technicians are assigned/dispatched and repairs are made/completed (Abstract; Column 1, Lines 29-61).

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting/optimizing the parts needed for a repair as taught by Smith et al. would have benefited from providing a system for managing service/repairs and more specifically assigning/dispatching the appropriate technician to repair based on the symptoms (nature of the failure/malfunction) in view of the teachings of Glovitz et al.; the resultant system enabling users to assign/dispatch the technician best suited from the particular repair (Glovitz et al.: Column 14, Lines 20-25).

Regarding Claim 3 Smith et al. teach a method for predicting/optimizing the parts needed for each repair job wherein the method makes several simplifying assumptions, which can be removed, including but not limited to: job/part requirements do not change/vary from one job to the next and the replenishment of service inventories (supplies, materials, kits, components, etc.) "freely between jobs" by technicians (service crews). Smith et al. further teaches that it is "possible to reoptimize the servicemen's inventory for each call." (Paragraph 3, Page 852).

Smith et al. does not expressly teach identifying repair/failure symptoms or subsequently determining the expected waste based (in response) on those symptoms as claimed.

Glovitz et al. teach identifying repair/service symptoms (nature of malfunction, failure mode/type, etc.) in an analogous art of field service/repair, as part of the well-known process of accepting, diagnosing (by the call center agent/personnel/qualifier as well as the technician) and assigning/dispatching of a service technician to the field (Column 1, Lines 41-60; Column 2, Lines 42-53; Column 10, Lines 36-44; Column 14, Lines 20-25; Table 1, Fields 5 and 27-28).

It would have been obvious to one skilled that the method for optimizing/predicting the parts needed for each repair job, with its ability to reoptimize

technician part inventories between each service call/repair, as taught by Smith et al. would have benefited from utilizing a system and method for managing service/repair requests especially the ability to assign/dispatch the appropriate service technician to a field repair utilizing a plurality of factors (skills, location, failure type, etc.) in view of the teachings of Glovitz et al.; the resultant system ensuring that the appropriate (least waste, highest probability of job completion, etc.) technician and parts are assigned/dispatched to service requests/repair jobs based on the nature of the service request (Smith et al.: Paragraph 3, Page 849; Paragraph 1, Page 850; Glovitz et al.: Column 4, Lines 20-25).

Regarding Claims 6 and 19 Smith et al. does not teach analyzing a repair history for the product (item, equipment, etc.) as claimed.

Glovitz et al. teach analyzing a repair history for the product (item, equipment, etc.), in an analogous art of repair/service management for the purposes of diagnosing (classifying, qualifying, understanding, etc.) the nature of the service/repair request (Column 1, Lines 41-60; Column 2, Lines 42-53; Column 10, Lines 36-44; Column 14, Lines 20-25; Table 1, Fields 5 and 27-28).

It would have been obvious to one skilled in the art at the time of the invention that the method for optimizing/predicting the parts needed for a repair as taught by Smith et al. would have benefited from determining (diagnosing) the nature of the

service/repair to be made by reviewing the service/repair history of the product (equipment, item, etc.) in view of the teachings of Glovitz et al.; the resultant system enabling assignment/dispatching of the most appropriate resources (parts, technician, etc.; Glovitz et al.: Column 14, Lines 20-25).

Regarding Claims 7 and 20 Smith et al. teach a method for predicting the parts needed for a repair wherein the optimization results in the minimization of costs and reduces the probability of stockout (Abstract). Smith et al. further teach the that method further includes:

- determining a number of times that each part was under-predicted ("stockout", part shortages, forecasted, used, estimated, provisioned, etc.; Paragraph 2, Page 849; Paragraph 1, Page 850); and

- determining a number of times that each part was correctly predicted (job completion rate; Paragraph 2, Page 849).

Smith et al. does not teach analyzing a repair history or subsequently determining the number of times that a part was over-predicted as claimed.

Glovitz et al. teach analyzing (reviewing) repair history, in analogous art of service/repair management, for the purposes of diagnosing the repair/service request (failure type, model, etc.) as discussed above. Glovitz et al. further teach that the repair management system manages/controls parts inventory for the purposes of evaluating

the performance of technicians, tracking part usage (open parts buffer, closed parts buffer, parts records, etc.) and billing (Column 1, Lines 30-61; Column 2, Lines 43-52; Column 6, Lines 1-10; Column 7, Lines 39-46 and 65-68; Column 26, Lines 19-25; Table 2)

While Glovitz et al. teach tracking and controlling the inventory of repair parts, specifically the tracking of used repair parts for billing and other purposes, Glovitz et al. does not expressly teach determining/tracking the leftover parts (not used, under-estimated/predicted, etc.) during the repair.

Official notice is taken that tracking parts through all stages (statuses, availability, etc.) of the parts (materials, components, items, kits, etc.) life cycle is well known in inventory management, service management and/or manufacturing systems and that such tracking provides a plurality of information that enables busineses to do such things as improve the system's ability to estimate (determine, predict, forecast, etc.) stocking/inventory levels.

For example it is common for inventory management systems to track such things as part/item usage rates, rework, returns/restocks, work in process and the like in order to get a more complete picture (availability, status, location, etc.) of all the inventory in the system such that the system can determine such things as how to optimally meet demand based on the currently available inventory or how to adjust/optimize replenishment strategies to avoid over/under stocking inventories.

It would have been obvious to one skilled in the art at the time of the invention that the method and system for predicting/optimizing the parts needed for a repair, assigning/dispatching the appropriate resources to effect the repair and tracking parts inventory as taught by the combination of Smith et al. and Glovitz et al. would have benefited from providing feedback to the optimization method/subsystem comprising the number of parts leftover from a repair (under-utilized) in view of the teachings of official notice; the resultant system providing feedback to the part optimization subsystem which can be used to further optimize/refine the parts prediction method.

Regarding Claims 8-9 and 21 Smith et al. teach a method for optimizing/predicting the parts needed for a repair further comprising associating and determining a cost associated with the over and under-prediction of parts (e.g. stockouts, excess inventory, etc.; Abstract; Paragraphs 2-3, Page 850; Pages 851-852; Equations 1.3, 3.1 and 3.2).

Regarding Claim 10 Smith et al. teach that the method for optimizing/predicting the parts needed for a repair utilizes standard/common (i.e. average) part usage rates (Paragraph 2, Page 852) and an inventory cost per part per servicemen (Paragraph 3, Page 850).

Smith et al. does not expressly teach that the associated and determined (calculated, estimated, etc.) costs are *average* costs as claimed.

Official notice is taken that utilizing averages to represent/generalize numbers and/or using averages when individual/specific data is unavailable is old and well known in the art.

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting/optimizing the parts needed for a repair, with its ability to associate and determine costs for each part in each technician's inventory, as taught by Smith et al. would have benefited from utilizing average costs in view of the teachings of official notice; the resultant system using average costs to predict/optimize parts needed for a repair thereby simplifying the calculations that need to be made and/or reducing the amount of information required to be maintained by not requiring the user/business to track (associate, determine, etc.) costs for each part inventoried by each technician.

Regarding Claims 12 Smith et al does not teach identifying training requirements/opportunities as claimed.

Glovitz et al. teach utilizing service/repair information (call records, parts used, etc.) to evaluate the performance of technicians ("Data collected for inventory usage and service of specific copiers may be used to evaluate equipment reliability and

profitability. The data may also be used to evaluate a technician's performance.", Column 1, Lines 50-61), in an analogous are of service/repair.

It would have been obvious to one skilled in the art at the time of the invention that the system and method for optimizing/predicting parts needed for a repair as taught by Smith et al. would have benefited from evaluating a technicians performance in view of the teachings of Glovitz et al.; the resultant system enabling businesses to evaluate technicians performance (Glovitz et al.: Column 1, Lines 50-61).

Glovitz et al. does not expressly teach identifying training for users (call qualifiers, technicians, etc.) as claimed.

Official notice is taken that it is old and well known to utilize performance evaluations to identify and implement training for employees (staff, personnel, etc.) wherein the evaluations assist in the selection and/or development of training to address identified areas requiring improvement.

It would have been obvious to one skilled in the art at the time of the invention that the system and method for predicting/optimizing parts needed for a repair and managing the service/repair process as taught by the combination of Smith et al. and Glovitz et al., especially with its ability to evaluate a technicians repair/service performance, would have benefited from identifying and implementing training to

address areas that require improvement based on the technician's performance evaluation in view of the teachings of official notice; the resultant system enabling businesses and users to improve their service/repair skills (e.g. improve a call center agents/technicians ability to more accurately diagnose the nature of the malfunction/repair and subsequently the parts/resources necessary for the repair).

Regarding Claim 13 Smith et al. teach a method for predicting/optimizing the parts needed for a repair further comprising providing/identifying a prioritized list of the parts to assist in the selection of an optimal set of parts to carry (inventory, support, etc.; Page 850, Paragraph 4; Page 851, Paragraph 1; Equation 3.1).

Smith et al. does not expressly teach identifying (flagging, marking, tagging, etc.) parts for the user (qualifier, staff, technician, engineer, etc.).

Official notice is taken that identifying/flagging information that the business/system deems important (relevant, necessary, required, etc.) for users to consider (review, view, etc.) is old and very well known.

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting/optimizing parts needed for a repair as taught by Smith et al. would have benefited from flagging/identifying parts to users in view of the teachings

of official notice thereby enabling businesses to identify information deemed important for the users' review.

Regarding Claim 14 Smith et al. teach a method for predicting/optimizing the parts needed for a repair wherein the method determines "...the appropriate collection of parts to be *carried*...." by the technician to the repair site (i.e. inherently teach a mode of transportation; Paragraph 1, Page 849).

While Smith et al. inherently teach a mode of transportation (foot, vehicle) as part of the field repair process Smith et al. is silent on the specific mode of transporting (carrying) the parts needed for a repair (i.e. repair vehicle).

Official notice is taken that carrying/transporting service parts (tools, kits, items, components, supplies, materials, etc.) utilizing a repair vehicle (can, van, truck, etc.) is old and very well known and provides a convenient method for transporting the technician to/from the repair site.

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting/optimizing parts to be carried to a field repair as taught by Smith et al. would have benefited from having the technician utilize a vehicle to transport/carry the parts necessary for a repair in view of the teachings of official notice;

the resultant system enabling the technician to conveniently carry heavy and/or bulky parts.

Regarding 15 Smtih et al. teach a method and system for deciding which repair *parts* (items, components, products, etc.) to stock/carry (inherently which parts not to carry/stock/support) in order to minimize costs (inventory costs, etc.) and maintain an optimal collection of parts (inventory) to obtain a desired job completion rate (Pages 849-850, 852).

Smith et al. does not expressly teach determining which *products* are the least desirable to support as claimed.

Glovitz et al. inherently teach determining which products are no longer desirable to support wherein the system determines the reliability and/or profitability of equipment (product, item, etc.) utilizing information collected during the repair process, in an analogous art of service/repair management (i.e. unprofitable and/or unreliable products being inherently undesirable to keep/support; Column 1, Lines 50-61).

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting/optimizing the parts needed for a repair, with its ability to identify parts which are not desirable/optimal to stock/carry, as taught by Smith et al. would have benefited from determining the profitability and/or reliability of the products

being repaired in view of the teachings of Glovitz et al.; the resultant system enabling users to minimize costs by eliminating parts/products that are no longer desirable to stock/carry/support (Smith et al.: Pages 849-850).

Regarding Claim 16 Smith et al. does not expressly teach identifying personnel for training as claimed.

Glovitz et al. teach utilizing service/repair information (call records, parts used, etc.) to evaluate the performance of technicians ("Data collected for inventory usage and service of specific copiers may be used to evaluate equipment reliability and profitability. The data may also be used to evaluate a technician's performance.", Column 1, Lines 50-61), in an analogous are of service/repair.

It would have been obvious to one skilled in the art at the time of the invention that the system and method for optimizing/predicting parts needed for a repair as taught by Smith et al. would have benefited from evaluating a technician's performance in view of the teachings of Smith et al.; the resultant system enabling businesses to a evaluate technicians performance (Glovitz et al.: Column 1, Lines 50-61).

Glovitz et al. does not expressly teach identifying personnel for training as claimed.

Official notice is taken that it is old and well known to utilize performance evaluations to identify personnel requiring training and then implementing training for the identified employees (staff, personnel, etc.) based on performance evaluation that assist in the selection and/or development of the training to addresses the identified areas requiring improvement.

It would have been obvious to one skilled in the art at the time of the invention that the system and method for predicting/optimizing parts needed for a repair and managing the service/repair process as taught by the combination of Smith et al. and Glovitz et al., especially with its ability to evaluate a technicians repair/service performance, would have benefited from identifying personnel needed training and the implementing training to address areas that require improvement based in view of the teachings of official notice; the resultant system enabling businesses and users to improve their service/repair skills (e.g. improve a call center agents/technicians ability to more accurately diagnose the nature of the malfunction/repair and subsequently the parts/resources necessary for the repair).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Wetzer et al., U.S. Patent No. 6,820,038, teach a method and system for predicting the parts needed for a repair (provisioning and issuance of components/parts in a maintenance, repair or overhaul environment) wherein the system "identifies the appropriate members or components of a kit" and distributes repair kits (components, parts, etc.). Wetzer et al. teach that the system optimizes kits in order to minimize costs and maximize the probability of successful repairs (job completions; i.e. designing repair kits that are not over-inclusive or under-inclusive). Wetzer et al. further teach that the system comprises predictive maintenance planning and scheduling subsystems (modules), tracks/monitors repair history information as well as tracks parts/kits usage including but not limited to kits returned to stock.

- Cornett et al., U.S. Patent No. 5,216,612, teach a maintenance system and method further comprising a plurality of subsystems/modules including but not limited to a spares (part) inventory management subsystem wherein parts are allocated to specific repairs/maintenance requests.

- Bona et al., U.S. Patent No. 6,483,292, teach a service/repair management system and method for assisting technicians conduct onsite repairs (inspection, repair/replace parts, etc.) wherein the system comprises a plurality of subsystems including but not limited to parts inventory management (replaceable parts manager,

part stock, etc.) and technician/request scheduling that enable the company/technician to assemble the resources (parts, technician, etc.) necessary for the repair.

- Shinohara, Yukio, U.S. Patent No. 6,647,371, teach a system and method for predicting the parts needed for a repair (repair parts demand) wherein the system identifies symptoms and trouble rates based on the analysis of historical repair/service information.

- Kipersztok et al., U.S. Patent No. 6,751,536, teach a system and method for determining the optimal repair/service (actions, parts, personnel, etc.) needed for a product (piece of equipment, airplane, etc.) utilizing a plurality of information including failure/service symptoms, expected product usage (e.g. current/future destinations), replacement part costs, labor, and availability. Kipersztok et al. further teach developing/providing users with a prioritized list of suspect parts (i.e. parts requiring replacement and/or repair) based on observed symptoms and failure probabilities.

- Vernon, William, U.S. Patent No. 6,922,867, teach a method and system for managing assets (equipment, parts, tools, etc.) utilized in the repair/service of products/equipment wherein the system determines such things as the cost of an excessive field spares inventory and repeat visits to customer sites caused by the ineffective use of field stocks for the purposes of increasing productivity, lowering inventory carrying costs, reducing nonproductive service calls, decreasing returns of non-defective inventory and the like.

- Yang et al., U.S. Patent Publication No. 2001/0034673, teach a system and method for providing parts inventory planning and management wherein the system

optimizes inventory levels at one or more points in the supply chain utilizing a plurality of factors including but not limited to parts demand, parts inventory levels, etc. for the purposes of reducing the costs associated with excessive inventories, customer service and the like resulting from the under-availability of parts.

- Squeglia et al., U.S. Patent Publication No. 2002/0156692, teach a method and system for managing the supply (inventory) of replacement (spare) parts for a product (equipment) wherein the system provides/exchanges repair (e.g. repair history), maintenance, parts (e.g. availability) and diagnostic information to technicians who effect product repairs. Squeglia et al. further teach the maintenance system and method provides e-training and other tools to assist technicians in diagnosing (mapping symptoms to repairs) service/repair needs.

- Dellar et al., U.S. Patent Publication No. 2003/005573, teach a system and method for managing repair/service parts (spare, consumables, kits, etc.) wherein the system tracks spare parts, consumables and refurbishables as well as provides detailed information on the location and usage of the parts/components. Dellar et al. further teach that the system comprises a plurality of subsystems including but not limited to preventive maintenance parts forecaster, spare parts and tool performance manager and maintenance log integrator.

- Smith, William, U.S. Patent Publication No. 2003/095778, teach a method and system for predicting a part needed for a field repair wherein the system ensures the accurate and timely return of service parts. Smith further teaches that "Much of the

efficiency of the modern-day field service technician thus depends on having the correct replacement part on hand when a problem arises." is old and well known.

- Mamer et al. teach a method for optimizing the field repair kits of service technicians as a special case of the well-known Balinski selection problem.

- Botter, Rene et al., Stocking strategy for service parts teaches a method for managing/optimizing service parts inventories wherein the method determines what parts should be stocked, where the parts should be stocked and how many of each service part should be stocked (i.e. field stocking strategy).

- Rustenburg et al., Spare parts management for technical systems, teach a method for optimizing/predicting the parts required for one or more repairs in which the method attempts to minimize excessive inventories/waste.

- Katzel, Jeanine, teach the commercial availability and wide spread use of a plurality of maintenance management systems wherein the systems include preventative/predictive maintenance, maintenance history, parts inventory management/control and other capabilities.

- Cohen, Morris et al., Out of Touch with Customer Needs? Spare Parts and After Sales Service, teach the need and opportunities in optimizing service delivery (after sales service, repair, maintenance).

- Cohen, Morris et al., Identifying opportunities for Improving Teradyne's Service-Parts Logistics system, teaches a system and method for optimizing a global service-parts logistics network.

- Hall, John, Software to make field tech's job easier?, teaches the commercial availability of a repair/service management system from FieldCentrix wherein the system tracks leftover parts.

- Albright, Brian, Just-in-case supply chain, teaches the commercial availability of a plurality of systems and method for managing the service supply chain (repairs, service, etc.) wherein the systems include service parts inventory management capabilities for managing a service parts inventory in a multi-echelon supply chain from service vehicles, distributors/depots and the like. More specifically Albright teaches Hewlett-Packard's utilizing of Baxter Planning Systems' service parts planning software/system.

- FieldCentric.com Web Pages, teaches the commercial availability of a system and method for managing field service operations wherein the system comprises scheduling, dispatching, preventative maintenance, repair history, workflow, and part usage/tracking (parts used, leftovers, etc.) capabilities.

- Xelus.com Web Pages, teaches the commercial availability of a service inventory management system and method that enables businesses to effectively source, deploy and replenish service part inventories.

- Patton, Joseph et al., Service Parts Handbook Second Edition, teaches a plurality of old and very well known service parts/service industry techniques, tools and methods including but not limited to vehicle stocking, part usage diagnostics, parts provisioning, service part selection and the like.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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